Sentinel® AC & DC Current Logger Models SDL A401 & SDL A402

Model SDL A402

The Sentinel® Current Logger Models SDL A401 and SDL A402 are designed for use with AEMC® detachable current probes or AmpFlex® sensors (model dependent – see chart on page 8).

Features

- True RMS current measurements
- DC current measurements when used with Hall Effect Current Probes on Model SDL A402
- Low-cost, self-contained, portable
- Measures up to 1000A (probe dependent) (see Current Probe chart on page 8)
- Programmable storage mode
- Programmable storage rate
- Records up to 480,000 measurements (1MB)
- 64 samples per cycle
- Includes DataView® software
- Optically isolated USB 2.0 communication
- Detachable current probes
- 600V Cat. III, 300V Cat. IV

Applications

- Load profiling
- Energy management
- Preventative maintenance
- Stray current monitoring

Model SDL A402 recording phase and neutral currents on a feeder.

Specifications

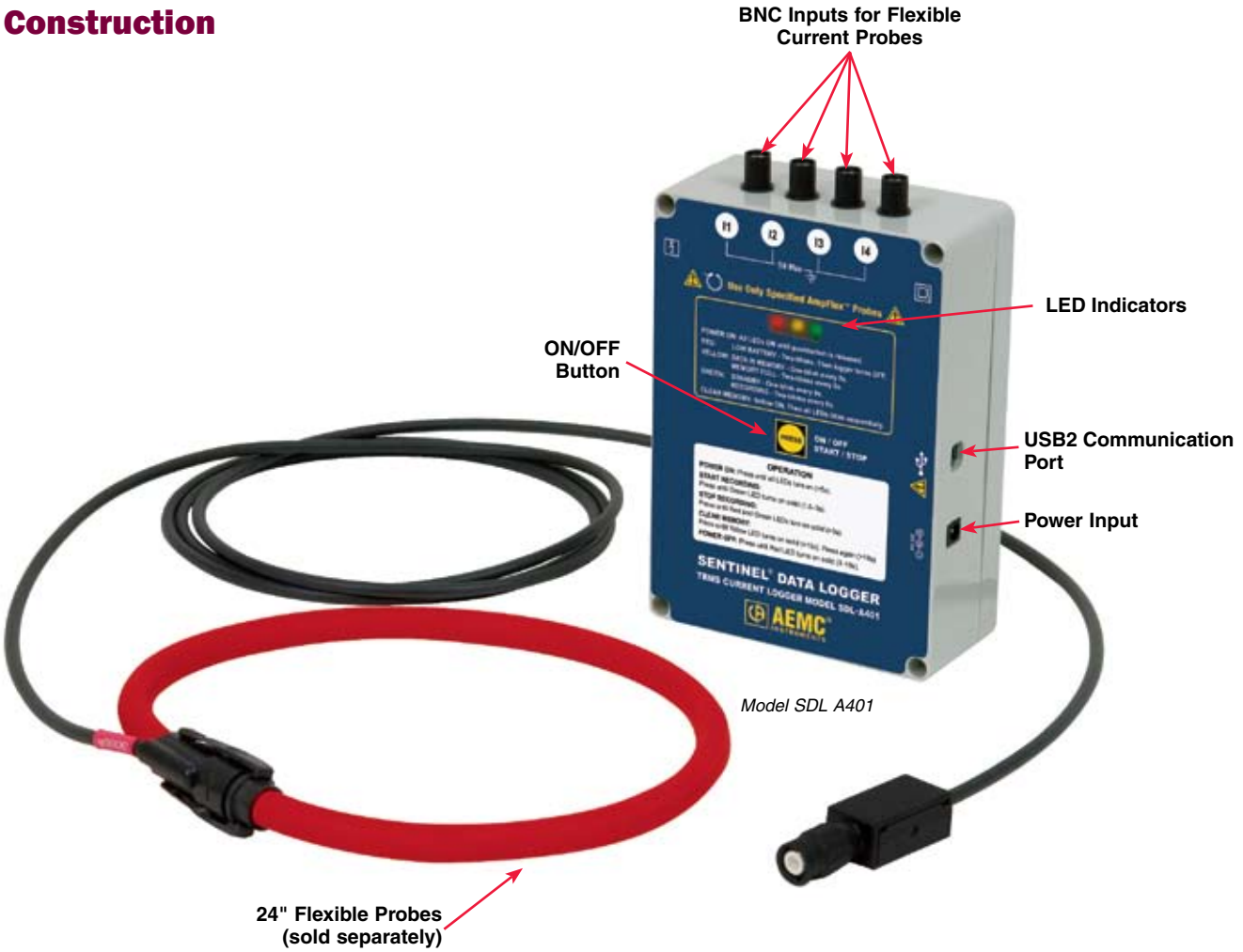
MODELS	SDL A401	SDL A402
ELECTRICAL		
Number of Channels	Four	Four
Input Termination	BNC	BNC
Sensor Type	24" AmpFlex® Flexible Probe	CT with BNC 1V output*
Current Range	5 to 1000A or 15 to 3000A, sensor dependent	Probe dependent
Resolution	0.25A	Probe dependent
Accuracy	±1% of Reading ± 1.5A	Probe dependent
Sample Rate	64 samples/cycle	
Storage Rate	Programmable from 250ms to 12 hours	
Storage Technique	Stop when full, FIFO, and Extended Recording Mode (XRM™)	
Memory Capacity	480,000 measurements (1MB)	
Communication	USB 2.0 optically isolated	
Controls	One button to turn logger on/off and start/stop recording	
Indicators	Red, Yellow and Green status indicators	
Power Source	AC power/rechargeable NiMH batteries	
Battery Life	Power ride through 10 hours	
MECHANICAL		
Protection Index	IP50	
Dimensions	6.73 x 4.76 x 2.17" (171 x 121 x 55mm)	
Case Material	Polycarbonate UL94 V-2	
ENVIRONMENTAL		
Operating Temperature	14° to 122°F (-10° to 50°C)	
Storage Temperature	-4° to 140°F (-20° to 60°C)	
Relative Humidity	0 to 85% RH	
SAFETY		
Safety Rating	600V Cat. III, 300V Cat. IV (factor of current probe)	
Double Insulation ⧈	Yes	

**Use only specified current probes*

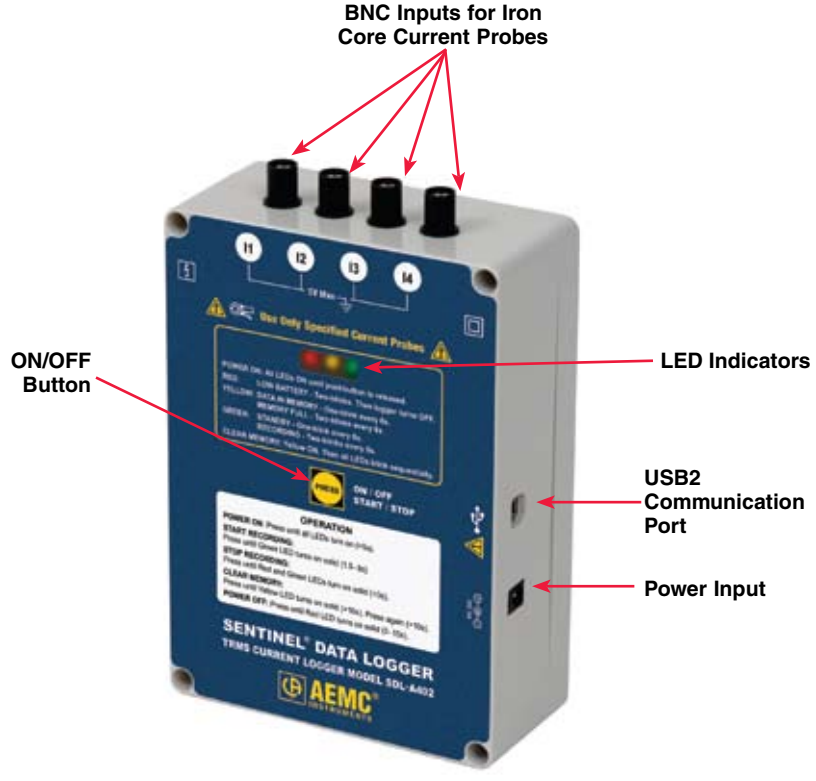
120V US wall charger is included with Models SDL A401 and SDL A402

USB cable is included with all Sentinel® Data Loggers

Construction



Model SDL A401



Model SDL A402

DataView®

DataView® Software – Data Analysis and Reporting Software

Features

- Display and analyze real-time waveform and harmonic data on your PC*
- Display waveforms, trend graphs, harmonics and text summaries
- Configure all data logger functions and parameters from your PC including sample rate, recording length, channel configuration and more
- Create and store a complete library of configurations that can be uploaded to the logger as needed
- Zoom in and out and pan through sections of the graph to analyze the data
- Download, display and analyze recorded data
- Create custom views and reports
- Print reports using standard or custom templates you design
- Free on-line software upgrades

Minimum system requirements

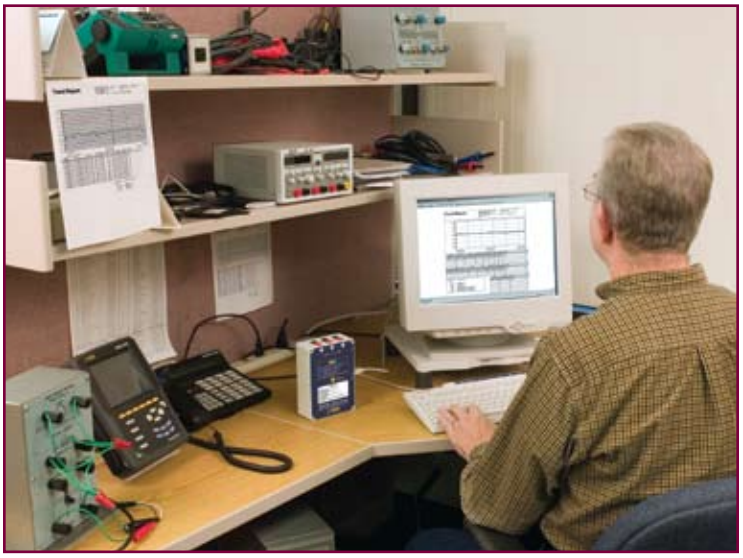
- Windows® 2000/XP/Vista
- 128MB of RAM for Windows® 2000 (256MB recommended)

  256MB of RAM for Windows® XP

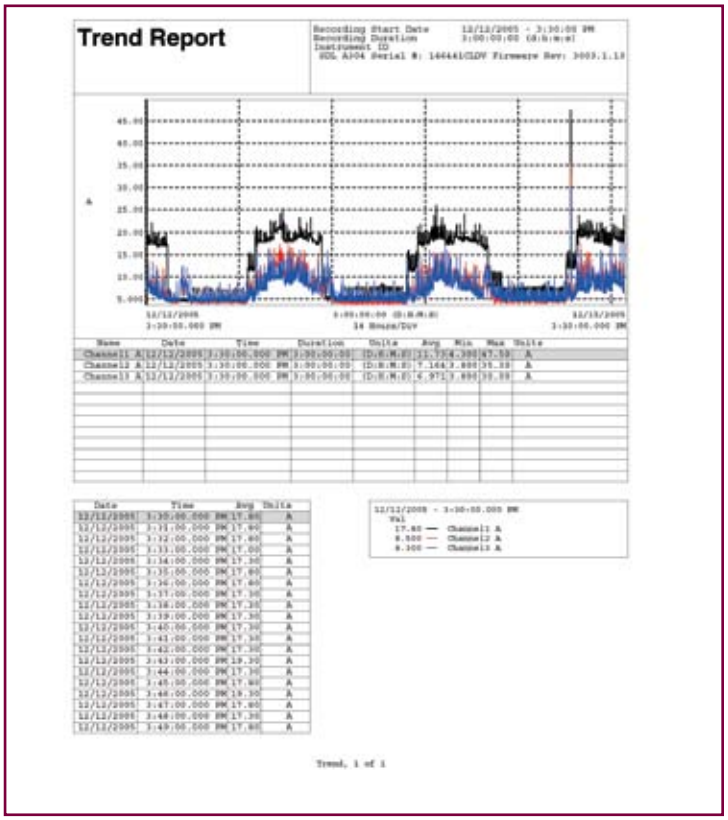
  512MB of RAM for Windows® Vista
- 80MB of hard disk space (200MB recommended)
- CD-ROM Drive

**Real-time data is not stored in the logger, but can be stored in your PC on demand.*

DataView® is included with all Sentinel® Loggers

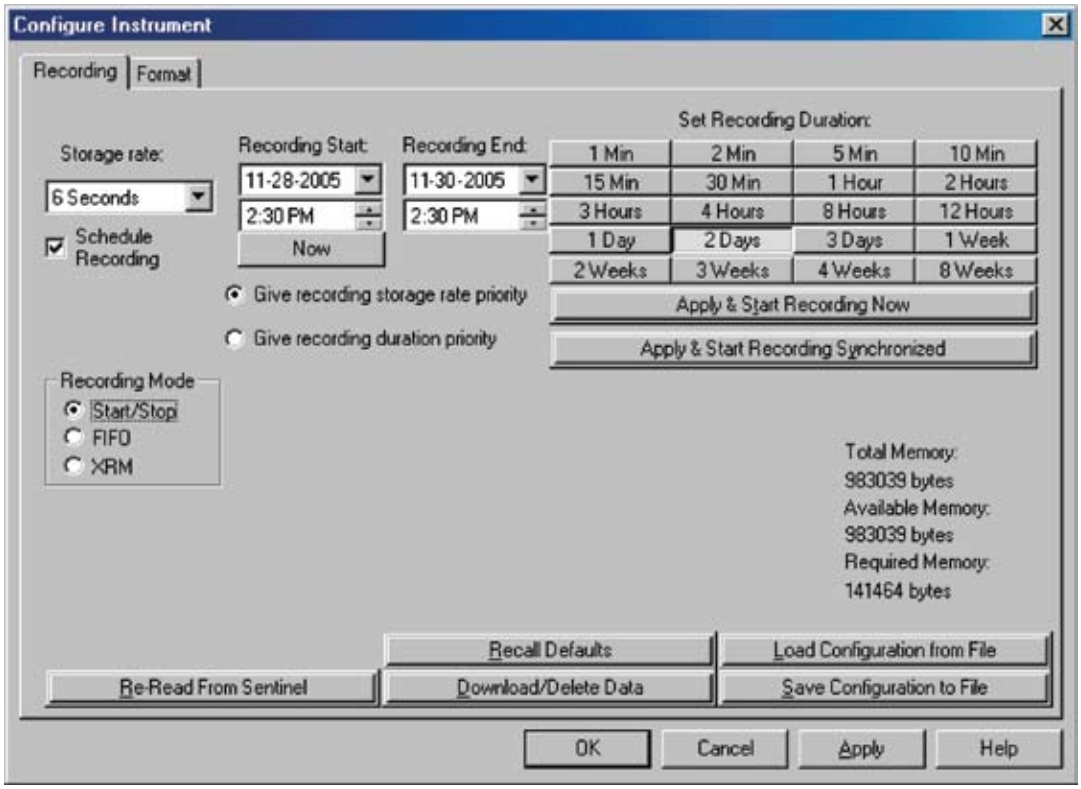


System configuration as well as data retrieval and analysis is easily accomplished using DataView® and Sentinel® connected to your computer using a USB port.

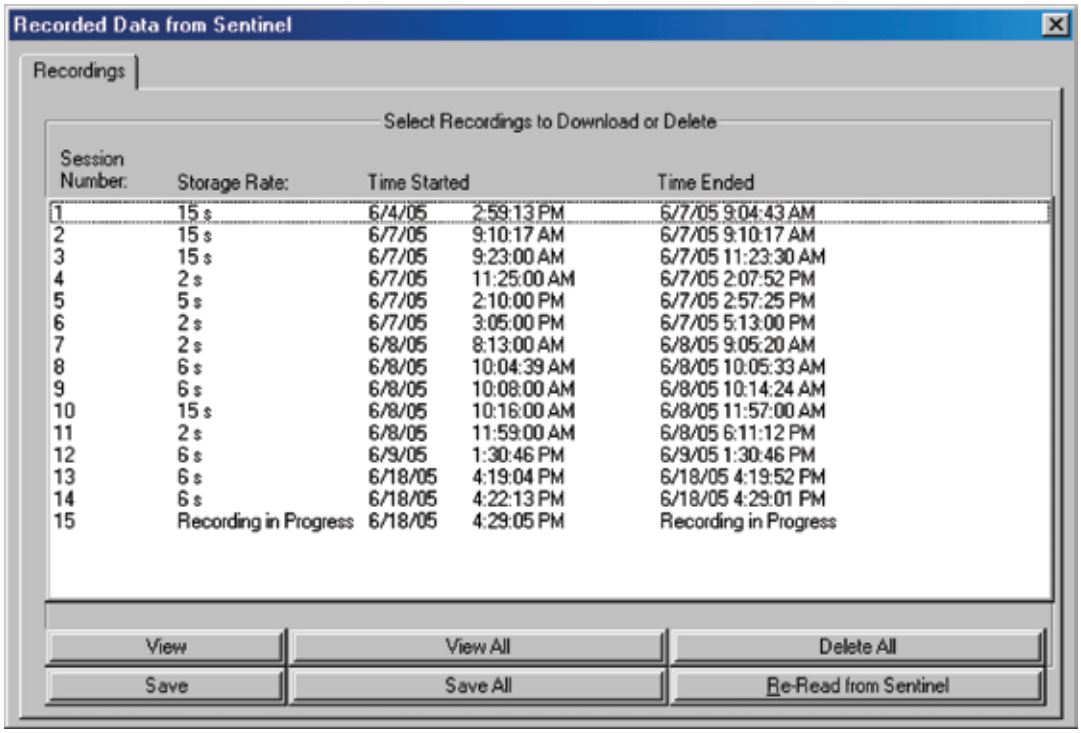


Typical report printout showing graphical text and information from recorded data.

Dataview® Displays

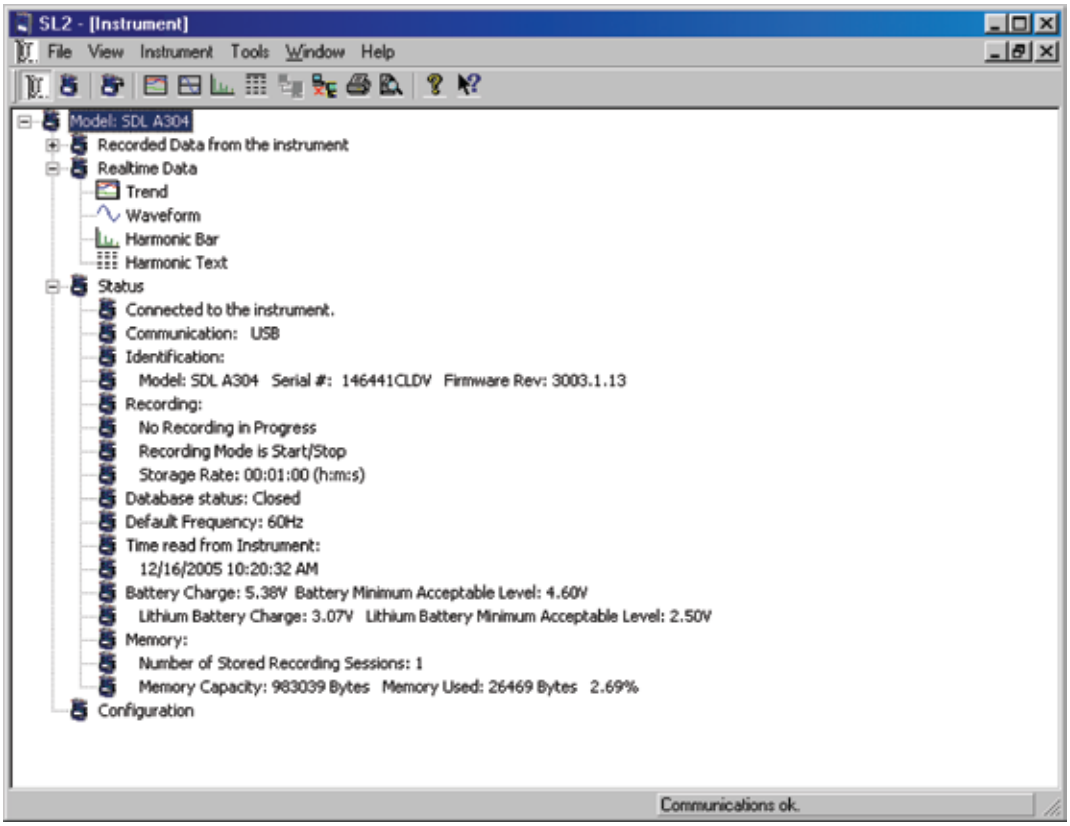


Tabbed configuration dialog boxes allow for easy setup of all recording functions.

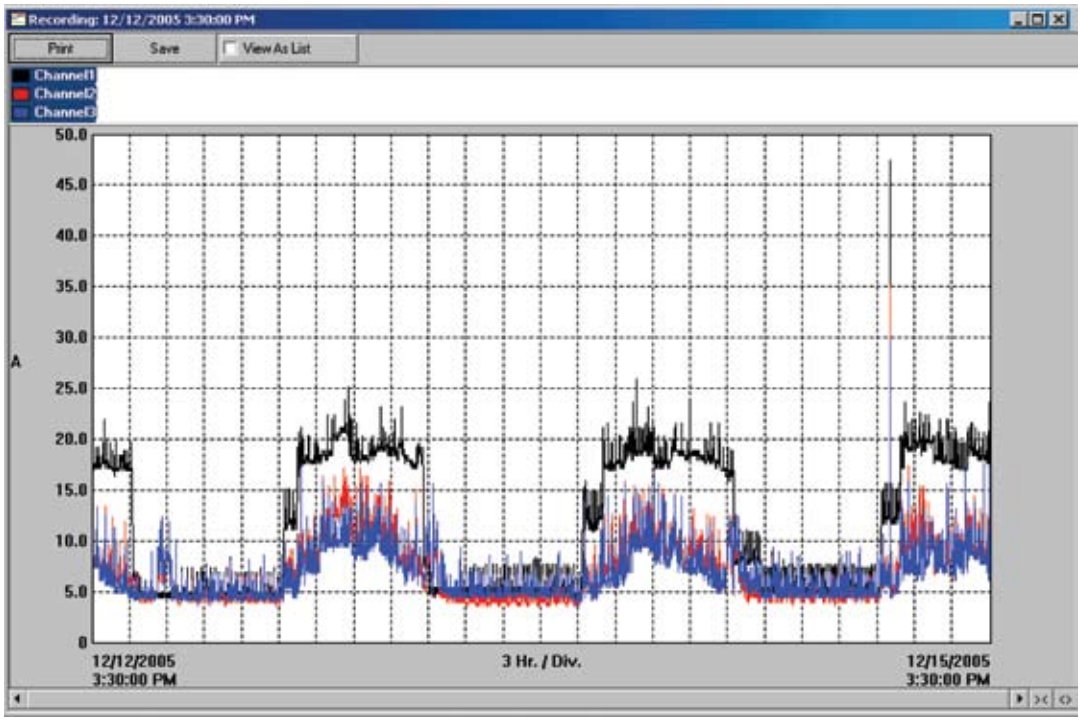


Recorded data dialog box allows clear and easy access to all stored data sessions in the Sentinel® data logger. You can choose an individual session or all sessions to download.

Dataview® Displays

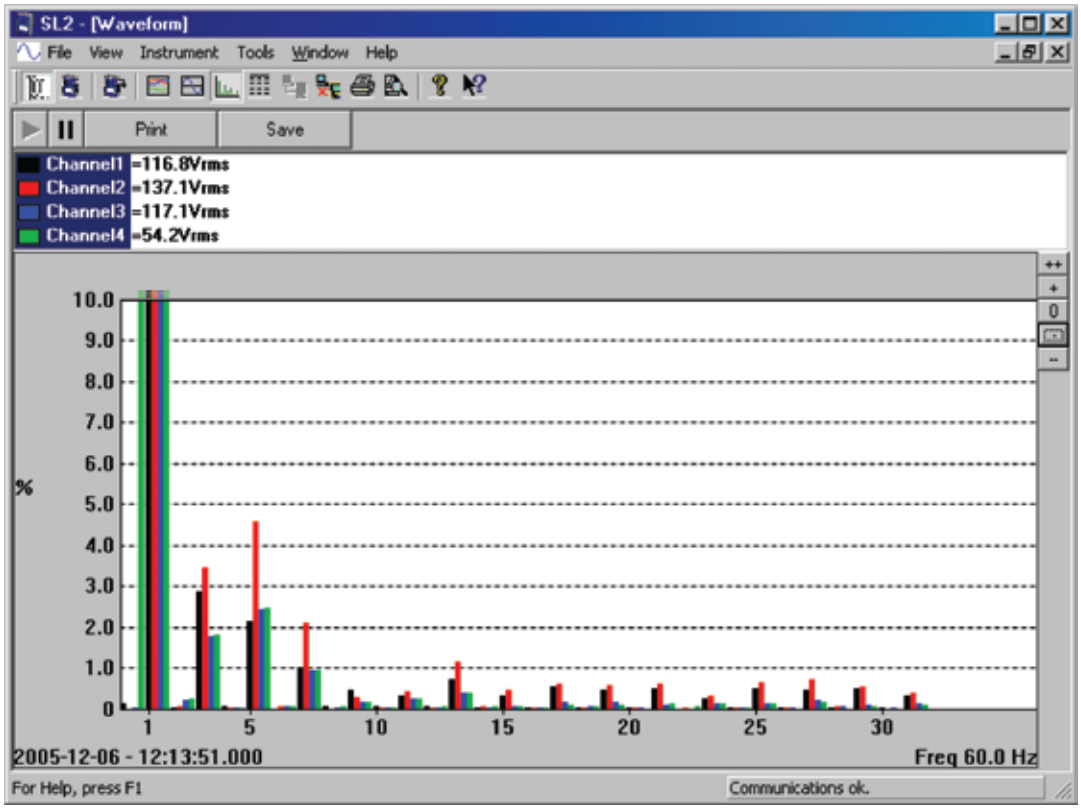


Clear and easy-to-read status update is displayed when DataView® and Sentinel® Loggers connect. From this menu you can view real-time data, download recorded data and configure the Sentinel® Logger.

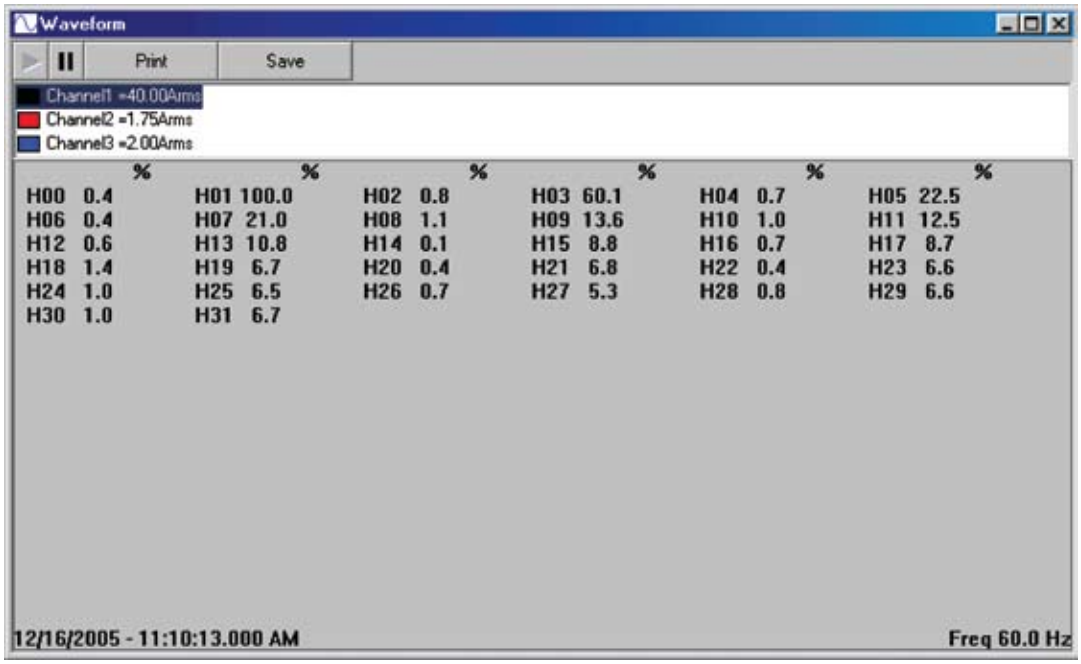


Typical real-time waveform display of data being monitored or recorded.

Dataview® Displays



Harmonic content displayed in bargraph form in real time using DataView® for any or all inputs.



Harmonic content information can be displayed in a text format for all harmonics out to the 30th.

Accessories

AEMC® AmpFlex® Sensors Compatible with Model SDL A401

	Probe Model	Measurement Range AC	Sensor Length Inches (mm)	Maximum Conductor Size Inches (mm)	Output Connection	Catalog No.
	SDL 24-1000A BNC	5 to 1000A	24" (610mm)	8" (190mm)	Lead/ BNC	2129.00
	SDL 36-1000A BNC	5 to 1000A	36" (910mm)	11" (290mm)	Lead/ BNC	2129.01
	SDL 24-3000A BNC	15 to 3000A	24" (610mm)	8" (190mm)	Lead/ BNC	2129.02
	SDL 36-3000A BNC	15 to 3000A	36" (910mm)	11" (290mm)	Lead/ BNC	2129.03

AEMC® Current Probes Compatible with Model SDL A402

	Probe	Measurement Range AC	Measurement Range DC	Output Signal Voltage	Maximum Conductor Size ø Cable	Maximum Conductor Size Bus Bar	Output Connection	Catalog No.
	MN103*	1mA to 10A 1 to 100A	–	1mVAC/mAAC 1mVAC/AAC	0.47" (12mm)	N/A	Lead	1031.02
	MN114*	1mA to 10A	–	100mVAC/AAC			Lead	2110.71
	MN251*	0.1 to 240A	–	1mVAC/AAC			Lead	2115.77
	MN307*	10mA to 12A	–	100mV/AAC	0.78" (20mm)	N/A	Lead	2116.23
	MN375*	0.1 to 10A	–	100mV/AAC			Lead	2115.41
	SL201*	50mA to 1.5A 500mA to 120A	50mA to 2A 500mA to 150A	1mV/mAAC/DC 1mV/AAC/DC	0.46" (12mm)	N/A	Lead	1201.40
	SL206*	10mA to 1.5A 50mA to 60A	10mA to 2A 50mA to 80A	1mV/mAAC/DC 10mV/AAC/DC			Lead	1201.45
	SL261	100mA to 10A 1 to 100A	100mA to 10A 1 to 100A	100mV/AAC/DC 10mV/AAC/DC			Lead w/BNC	1201.51
	MD301*	2 to 500A	–	1mVDC/AAC	1.18" (30mm) 2 x 500MCM	2.48 x 0.20" (63 x 5mm)	Lead	1201.07
	MD314*	4 to 500A	–	1mVAC/AAC			Lead	2110.75
	SR652*	0.1 to 1000A	–	1mVAC/AAC	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Lead	2113.46
	SR752*	0.1 to 1000A	–	1mVAC/AAC			Lead	2116.32
	SR759*	1mA to 1A 10mA to 10A 0.1 to 100A 1 to 1000A	–	1000mVAC/AAC 100mVAC/AAC 10mVAC/AAC 1mVAC/AAC			Lead	2116.33
	MR461	0.2 to 40A 0.5 to 400A	0.4 to 60A 0.5 to 600A	10mV/AAC/DC 1mV/AAC/DC	One 1.18" (30mm) Two 0.95" (24mm) 2 x 500MCM	Two 1.2 x 0.4" (31.5 x 10mm)	Lead w/BNC	1200.72
	MR561	0.2 to 100A 0.5 to 1000A	0.4 to 150A 0.5 to 1500A	10mV/AAC/DC 1mV/AAC/DC	One 1.5" (39mm) Two 0.98" (25mm)	One 1.96 x 0.49" (50 x 12.5mm) Two 1.96 x 0.19" (50 x 5mm)	Lead w/BNC	1200.73

Consult AEMC® Instruments for other probe selections.
Note: Leads are attached and not shown in above Current Probe images.

Output Terminations

Lead with BNC:
Insulated 6.5 ft (2m) coaxial cable with insulated BNC connector rated 600Vrms

Lead:
Double/reinforced 5 ft (1.5m) lead with safety 4mm banana plug

**Requires Banana Plug (female) to BNC (male) to connect the probe to the logger (below).*
Catalog # 2118.46

Comparison Chart

MODEL	SDL V301	SDL V401	SDL A301	SDL A302	SDL A303	SDL A304	SDL A401	SDL A402
Input Type	AC/DC Volts	AC/DC Volts	AC Amps	AC Amps	AC Amps	AC Amps	AC Amps	AC/DC Amps
AC Range	0 to 600VAC	0 to 600VAC	5 to 1000A	15 to 3000A	5 to 1000A	15 to 3000A	5 to 1000A or 15 to 3000A, sensor dependent	Probe dependent
DC Range	0 to 850VDC	0 to 850VDC	–	–	–	–	–	Probe dependent
Resolution	0.1V	0.1V	0.1A	0.25A	0.1A	0.25A	0.25A	Probe dependent
Input Termination	Recessed banana jacks	Recessed banana jacks	Hard-wired flexible CTs	Hard-wired flexible CTs	Hard-wired flexible CTs	Hard-wired flexible CTs	BNC	BNC
No. of Inputs	Three	Four	Three	Three	Three	Three	Four	Four
Sample Rate	64 samples/cycle	64 samples/cycle	64 samples/cycle	64 samples/cycle	64 samples/cycle	64 samples/cycle	64 samples/cycle	64 samples/cycle
Memory Capacity	(1MB) 480,000 measurements	(1MB) 480,000 measurements	(1MB) 480,000 measurements	(1MB) 480,000 measurements	(1MB) 480,000 measurements	(1MB) 480,000 measurements	(1MB) 480,000 measurements	(1MB) 480,000 measurements
Power Source	Alkaline batteries	AC power/ NiMH batteries	Alkaline batteries	Alkaline batteries	AC power/ NiMH batteries	AC power/ NiMH batteries	AC power/ NiMH batteries	AC power/ NiMH batteries
Battery Life	100 hours to 90 days	Power ride through 10 hours	100 hours to 45 days	100 hours to 45 days	Power ride through 10 hours	Power ride through 10 hours	Power ride through 10 hours	Power ride through 10 hours
What's Included	Six color-coded leads, DataView® software, batteries, user manual	Eight color-coded leads, DataView® software, batteries, 120V wall charger, user manual	Three hard-wired flexible CTs, DataView® software, batteries, user manual	Three hard-wired flexible CTs, DataView® software, batteries, user manual	Three hard-wired flexible CTs, DataView® software, batteries, 120V wall charger, user manual	Three hard-wired flexible CTs, DataView® software, batteries, 120V wall charger, user manual	DataView® software, batteries, 120V wall charger, user manual	DataView® software, batteries, 120V wall charger, user manual

ORDERING INFORMATION — CATALOG NO.

Sentinel® Current Logger Model SDL A401 (4-Channel, for use with AmpFlex® sensors with BNC Output, rechargeable NiMH batteries, 120V US wall charger) (Sensor not included) . . . . . **Cat. #2134.19**

Sentinel® Current Logger Model SDL A402 (4-Channel, for use with Iron Core 1V BNC Output, rechargeable NiMH batteries, 120V US wall charger) (Current probes not included) . . . . . **Cat. #2134.20**

Sentinel® Current Logger Model SDL A401 Kit (4-Channel, three 1000A 24" AmpFlex® with BNC Output, rechargeable NiMH batteries, 120V US wall charger, carrying bag) . . . . . **Cat. #2134.21**

Sentinel® Current Logger Model SDL A401 Kit (4-Channel, four 1000A 24" AmpFlex® with BNC Output, rechargeable NiMH batteries, 120V US wall charger, carrying bag) . . . . . **Cat. #2134.22**

Sentinel® Current Logger Model SDL A401 Kit (4-Channel, three 3000A 36" AmpFlex® with BNC Output, rechargeable NiMH batteries, 120V US wall charger, carrying bag) . . . . . **Cat. #2134.23**

Sentinel® Current Logger Model SDL A401 Kit (4-Channel, four 3000A 36" AmpFlex® with BNC Output, rechargeable NiMH batteries, 120V US wall charger, carrying bag) . . . . . **Cat. #2134.24**

Accessories (Optional)

Set of one black and one red leads with alligator clips . . . . . Cat. #2118.51
Banana (Female) – BNC (Male) Adapter (XM-BB) . . . . . Cat. #2118.46
Bag – Large Classic Tool Bag . . . . . Cat. #2133.71
AmpFlex® Model SDL 1000A 24" with BNC for use with Model SDL A401 . . . . . Cat. #2129.00
AmpFlex® Model SDL 1000A 36" with BNC for use with Model SDL A401 . . . . . Cat. #2129.01
AmpFlex® Model SDL 3000A 24" with BNC for use with Model SDL A401 . . . . . Cat. #2129.02
AmpFlex® Model SDL 3000A 36" with BNC for use with Model SDL A401 . . . . . Cat. #2129.03

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